AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Original) A method for fitting a surface to a point group using a computer, comprising the steps of:

a first step for judging reliability of the point group and

a second step for changing the method for fitting the surface to the point group based on a result of the judgment of reliability obtained in the first step.

2. (Original) The method according to claim 1, wherein

the first step comprising judging reliabilities of points composing the point group, and

the second step comprising changing the method for fitting the surface to the point group by varying a weight of each of the points based on the reliability of each of the points.

3. (Original) The method according to claim 1, wherein

data indicating reliabilities of the point group and the points are obtained by three-dimensional measurements.

4. (Original) A device for fitting a surface to a point group using a computer, comprising:

an obtaining section for determining reliability of each of points composing the point group and

a modifying section for varying a degree of the fitting of the surface to the point group depending on the reliabilities.

5. (Original) The device according to claim 4, comprising:

a weighting section for assigning a weight for each of the points based on the reliability of each of the points, wherein

the modifying section changes a degree of the fitting of the surface to the point group depending on the weights.

6. (Original) The device according to claim 4, wherein

the surface has been prepared in advance of the fitting.

7. (Original) The device according to claim 4, wherein

an amount of data for the surface is smaller than that of the point group.

8. (Original) The device according to claim 4, wherein

the data of the surface includes attribute information associated with form information.

9. (Original) The device according to claim 8, wherein

the data of the surface represents a form of a face, and the attribute information represents characteristic parts of the face.

10. (Original) A system comprising:

a measuring unit for measuring a distance therefrom to a plurality of points on a surface of an object;

a calculator for calculating reliabilities of respective distances of the measured distances;

a processor for modifying prepared data which represents a three-dimensional form using the reliabilities so that a three-dimensional form represented by the modified data resembles a form of the object.

11. (Previously Presented) A computer program product for fitting a surface to a point group comprising a computer readable storage medium having a computer program stored thereon for performing:

a first step for judging a reliability of the point group and

a second step for changing the method for fitting the surface to the point group based on a result of the judgment of reliability obtained in the first step.

Claims 12-13 (Cancelled)

14. (Currently Amended) ~~The processor according to claim 12, wherein~~

~~the first standard model has a plurality of construction points corresponding to which a plurality of control points are defined;~~

~~the second standard model has a plurality of construction points corresponding to which some of the control points defined by the first standard model are defined;~~

~~the first standard model is modified in accordance with movements of the construction points which move in accordance with movements of the control points; and~~

~~the second standard model is modified in accordance with movements of the construction points which move in accordance with movements of the control points.~~

A processor comprising:

an obtaining section for obtaining original data generated by measurements;

a first modifying section for modifying a first standard model based on the obtained data, the first standard model being previously prepared independently of the obtaining of original data; and

a second modifying section for modifying a second standard model based on an effect of the modification of the first standard model, the second standard model being relative to the first standard model,

wherein

the first standard model has a first construction point group and is modified in accordance with movement of the first construction point group,

the second standard model has a second construction point group and is modified in accordance with movement of the second construction point group,

the first construction point group is defined in association with a first control point group,

each of the control points of the first control point group is in association with the plural construction points of the first construction point group,

the first construction point group moves with movement of the first control point group that is defined in association with the first construction point group,

the second construction point group is defined in association with a second control point group,

each of the control points of the second control point group is in association with the plural construction points of the second construction point group,

the second construction point group moves with movement of the second control point group that is defined in association with the second construction point group, and

the second control point group is a part of the first control point group.

15. (Original) The processor according to claim 14, wherein

the control points for moving the construction points of the second standard model are corrected when adopting a result of the modification of the first standard model.

16. (Currently Amended) ~~The~~ A processor ~~according to claim 14~~ comprising:

an obtaining section for obtaining original data generated by measurements;

a first modifying section for modifying a first standard model based on the obtained data, the first standard model being previously prepared independently of the obtaining of original data; and

a second modifying section for modifying a second standard model based on an effect of the modification of the first standard model, the second standard model being relative to the first standard model, wherein

the first standard model has a plurality of construction points corresponding to which a plurality of control points are defined,

the second standard model has a plurality of construction points corresponding to which some of the control points defined by the first standard model are defined,

the first standard model is modified in accordance with movements of the construction points which move in accordance with movements of the control points,

the second standard model is modified in accordance with movements of the construction points which move in accordance with movements of the control points, and

defined as control points corresponding to the construction points of the second standard model are control points corresponding to construction points among the construction points of the modified first standard model which are the closest to the construction points of the second standard model.

17. (Currently Amended) ~~The~~ A processor ~~according to claim 14~~ comprising:

an obtaining section for obtaining original data generated by measurements;

a first modifying section for modifying a first standard model based on the obtained data, the first standard model being previously prepared independently of the obtaining of original data; and

a second modifying section for modifying a second standard model based on an effect of the modification of the first standard model, the second standard model being relative to the first standard model, wherein

the first standard model has a plurality of construction points corresponding to which a plurality of control points are defined,

the second standard model has a plurality of construction points corresponding to which some of the control points defined by the first standard model are defined,

the first standard model is modified in accordance with movements of the construction points which move in accordance with movements of the control points,

the second standard model is modified in accordance with movements of the construction points which move in accordance with movements of the control points, and

defined as control points corresponding to construction points of the second construction points are control points corresponding to points obtained by projecting the construction points of the second standard model on the first standard model.

Claim 18 (Cancelled)

19. (Currently Amended) ~~The~~ A process ~~according to claim 18, wherein~~

~~the first standard model has a plurality of construction points, and a plurality of control points are defined corresponding to the construction points;~~

~~the second standard model has a plurality of construction points and some of the control points defined by the first standard model are defined corresponding to the construction points;~~

~~the first standard model is modified in accordance with movements of the construction points which move with the control points move; and~~

~~the second standard model is modified in accordance with movements of the construction points which move with the control points move~~ comprising the steps of:

obtaining original data generated by measurements;

modifying a first standard model based on the obtained data, the first standard model being previously prepared independently of the obtaining of original data; and

modifying a second standard model based on an effect of the modification of the first standard model, the second standard model being relative to the first standard model, wherein

the first standard model has a first construction point group and is modified in accordance with movement of the first construction point group,

the second standard model has a second construction point group and is modified in accordance with movement of the second construction point group,

the first construction point group is defined in association with a first control point group,

each of the control points of the first control point group is in association with the plural construction points of the first construction point group,

the first construction point group moves with movement of the first control point group that is defined in association with the first construction point group,

the second construction point group is defined in association with a second control point group,

each of the control points of the second control point group is in association with the plural construction points of the second construction point group,

the second construction point group moves with movement of the second control point group that is defined in association with the second construction point group, and

the second control point group is a part of the first control point group.

Claims 20-24 (Cancelled)

25. (Currently Amended) ~~The~~ A modeling device ~~according to claim 24~~ for generating a three-dimensional model comprising:

a selection section for selecting a plurality of partial areas from measurement data obtained by measuring an object and

a modifying section for modifying a three-dimensional model based on a measurement data of each of the selected partial areas, wherein

the modifying section performs modification with respect to the standard model based on the whole measurement data before performing modification based on the measurement data of each of the partial areas.

Claims 26-31 (Cancelled)